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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/639,073	08/11/2003	Bohumil Lojek	ATM-250	6954
3897	7590	04/27/2004	EXAMINER	
SCHNECK & SCHNECK P.O. BOX 2-E SAN JOSE, CA 95109-0005			HUYNH, ANDY	
			ART UNIT	PAPER NUMBER
			2818	

DATE MAILED: 04/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/639,073	Applicant(s) LOJEK, BOHUMIL	
	Examiner Andy Huynh	Art Unit 2818	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) ☒ Responsive to communication(s) filed on 29 March 2004.

2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) ☒ Claim(s) 1-21 is/are pending in the application.

4a) Of the above claim(s) 1-4 is/are withdrawn from consideration.

5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.

6) ☒ Claim(s) 5-21 is/are rejected.

7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.

8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on 29 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \* c) ☐ None of:  
         1. ☐ Certified copies of the priority documents have been received.  
         2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
         3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>11/24/03</u> .	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____. 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) 6) <input type="checkbox"/> Other: _____.
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## **DETAILED ACTION**

### ***Election/Restrictions***

In the Response to the Restriction Requirement dated March 29, 2004, Applicant has elected, without traverse, Group II including claims **5-11**, drawn to a device, amended claims **5-11**, and added new claims **12-21** is acknowledged. Accordingly, claims **1-4** are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 35 § 1.142(b) and MPEP § 821.03. Applicant has the right to file a divisional application covering the subject matter of the non-elected claims **1-4**, drawn to a method.

### ***Information Disclosure Statement***

This office acknowledges receipt of the following items from the applicant: Information Disclosure Statement (IDS) filed on November 24, 2003. The references cited on the PTOL 1449 form have been considered.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims **8, 10, 11, 16, 19, 20 and 21** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled

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in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In claims **8 and 16**, “said second layer is oxide” is not disclosed or described in the specification.

In claims **10 and 19**, wherein said substrate layer further comprises “a thin surface layer” is not disclosed or described in the specification.

In claims **11 and 20**, “an input/output port in communication with said memory array; and a controller coupled to said input/output port and said memory array” is not disclosed or described in the specification.

In claim **21**, “an input/output port in communication with said memory array” is not disclosed or described in the specification.

### ***Claim Rejections - 35 U.S.C. § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims **5-7 and 13-15** are rejected under 35 U.S.C. 102(b) as being anticipated by Hoang (USP: 6,420,753), Applicant submitted prior art (ASPA).

Regarding claims **5 and 13**, Hoang discloses in Fig. 4c and related texts as set forth in column 8, lines 13-36, a block alterable memory cell/a dual transistor non-volatile electrically delectable and alterable semiconductor memory cell, comprising:

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a substrate layer (130) having a source implant/doped region/a source region (136), an active region (a region is laying between doped regions (132) and (134)), a floating gate transistor region/a doped region (134), and a drain implant/doped region/a drain region (132);

a tunnel oxide layer/a first insulating layer (144, 146, 148) overlaying a portion of said substrate layer;

a first layer/a floating gate layer (140) overlaying said tunnel oxide layer/the first insulating layer;

an inter poly layer/a second insulating layer (150) overlaying said first layer/the floating gate layer; and

a second layer/a control gate layer (138) extending over said floating gate transistor region and said active region to an edge of said drain implant/doped region/the drain region (Fig. 4c).

Regarding claims **6 and 14**, Hoang discloses the block alterable memory cell/the dual transistor non-volatile electrically delectable and alterable semiconductor memory cell of claim **5 or 13**, wherein the said substrate layer is a p-type doped substrate (column 6, lines 58-59).

Regarding claims **7 and 15**, Hoang discloses in Fig. 4c the block alterable memory cell/the dual transistor non-volatile electrically delectable and alterable semiconductor memory cell of claim **5**, wherein said source implant/doped region/the source region (136, N+), said drain implant region/the drain region (132, N+), and said floating gate transistor region/the doped region (134, N+) are n-type implants/dopants.

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***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims **9, 12, 17 and 18** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoang (USP: 6,420,753), Applicant submitted prior art (ASPA), in view of Ling (USP: 5,811,852).

Hoang discloses the claim limitations except for the block alterable memory cell of claim **5 or 13**, wherein said inter poly layer is a nitride layer/an ONO layer. Ling teaches that an oxide-nitride-oxide (ONO) layer is formed between a floating gate and a control gate to provide an improved memory cell structure as set forth in column 2, lines 29-36. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize the teaching of forming an oxide-nitride-oxide (ONO) layer as an inter poly layer between a floating gate and a control gate, as taught by Ling in order to improve the memory cell structure.

***Conclusion***

A shortened statutory period for response to this action is set to expire 3 (three) months and 0 (zero) day from the day of this letter. Failure to respond within the period for response will cause the application to become abandoned (see M.P.E.P 710.02(b)).

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andy Huynh, (571) 272-1781. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on (571) 272-1787. The Fax number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the -status of this application or proceeding should be directed to the receptionist whose phone number is (703) 308-0956.

AH

April 21, 2004

A handwritten signature in black ink, appearing to read "Andy Huynh", with a stylized flourish at the end.

Andy Huynh

Patent Examiner